FBIS Reg.

MHQ-6079-86
16 July 1986

MEMORANDUM FOR: Bureau Chiefs

FROM: STAT

Chief, Requirements and Analysis Branch, ADD/ESG/FBIS

SUBJECT: BACH Status

1.   Attached are several documents which may help to explain what has been happening in the BACH arena during recent weeks.

2.   In retrospect, we may have tried to accomplish too much in our attempt to deliver standard software for all bureaus to use. But -- nothing ventured, nothing gained. Because of the funding situation it was not possible to send someone to every bureau to install and customize the software for each unique environment. Instead, the comments, criticisms, and suggestions which you have sent via admin message have been extremely useful.

3.   There have been several suggestions which were at times a bit difficult to translate into the extremely precise world of program logic and code. Not having complete documentation of your punch and commo interfaces or procedures and without anyone at Headquarters who really feels qualified to answer all our questions, we've had to mak5 some assumptions and best guesses about how BACH should operate. Attachment A documents a meeting held to resolve conflicting suggestions regarding BACH design. We hope there will be enough flexibility built into release 1.2 to provide something for everybody.

4.   Features included in release 1.2 are listed in Attachment B. Our plan is to send the new software with specific test instructions to Tel Aviv and Key West. When they confirm its operability, we will send it to the remaining bureaus. Any database files (master lists or packages) will not have to be rebuilt for release 1.2.

5.   Following successful deployment of release 1.2 (hopefully during August 1986 -- see, I specified the year), a newly formed group of OPS, LRB, and ESG individuals will identify those BACH enhancements which will be included in release 2.0. Candidate enhancements can be found as Attachment C. Your suggestions are invited.

6.   One enhancement which will definitely be included is to enable bureau packages to be composed of LSL packages. To complete BACH's ability to support LSL processing at the bureaus, parallel printers will be sent to the eight bureaus who do not have BACH printers. These bureaus are FL, PA, PY, JN, NC, TA, AB, and MB. As part of our review of BACH's output capabilities

SUBJECT: BACH Status

the need for an alternative to the EXTEL as a printer became obvious.   TA had
proposed that BACH be modified to use the EXTEL as a printer.   While this is
theoretically possible, supplying a dedicated parallel printer is a more cost
effective solution and provides greater consistency in bureau hardware
configuration.   You will will be notified when the printers are shipped.

7.   In the hardware repair and purchase area: Both PA and PY's hard
disks have been repaired.   I am planning to send two ADD XT's to the bureaus
and keep the repaired units here.   The ADD units have been in constant use
since January with no problems.   A PLUSDEV Hardcard has been ordered for
installation in one of London's PC's so that the editors can have access to
the LSL.   While the Hardcard is presently about twice the price of an internal
hard disk, it has the advantage of extremely simple installation.

8.   Please continue to keep me advised on how the PC's are being used in
your bureaus.   I am particularly interested in any efforts to share files,
diskettes, or data between bureaus and between bureaus and Headquarters.
Unfortunately, our BACH experience in standardization (in specific, the "great
debate") has sensitized many at Headquarters to the problems inherent in
remote design and automation.   Subsequently there is a reluctance to approve
additional bureau developments.   Naturally this comes at the same time as
several efforts to automate Headquarters files for which the bureaus are the
primary users (the Cabinet and Diplomatic List and the Bureau coverage
schedules/change reports).   While I don't have a lot of extra resources to
spend on much more than problem resolution, the more I know about what is
going on out there, the better the job I can do in looking out for your
automation needs.

9.   The future of bureau automation was decided 15 July when the second
LCAB (Low Cost Automated Bureau) briefing was presented.   We completely
reworked Lockheed's design and reduced costs enormously.   Bureau automation
will be designed around PC's on a local area network.   A general word on
modernization at the bureaus: not everyone at Headquarters is aware of the
many positive aspects of computer usage at the bureaus, although many are
sensitive to evidence of continuing problems.   It would not go amiss, and I
would be delighted, if some positive developments regarding computer
applications were to be highlighted in messages to Headquarters.

10. Thanks again for your support.

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Attachments:
    A.   BACH Status Review Minutes, 18 June 1986
    B.   Changes to BACH Version 1.1 to Create 1.2
    C.   Desired BACH Changes for Release 2.0

SUBJECT: BACH Status

FBIS/ESG/ADD/RAB/ [   ] (16 July 1986)   STAT

Distribution:
    Original - ADD Chrono
        1 - Addressees
        1 - [   ]   STAT
        1 - C/OPS
        1 - ESG Chrono
        1 - FBIS Registry

ATTACH

SES-097-86
20 June 1986

MEMORANDUM FOR: [   ] C/ADD   STAT

FROM: [   ] GE/SES   STAT

SUBJECT: Minutes of the BACH Status Review, 18 June 1986

                                                    STAT

1. A BACH Status Review meeting was held from 1300-1430, 18 June 1986, in the Fourth Floor Conference Room, Key Building. A list of attendees is provided in Attachment A.

2. [   ] stated that the purpose of the meeting was to update everyone on the Bureau Automated Communications Header (BACH) status, and to surface for collective resolution communications and operational issues raised by recent field bureau message traffic. The meeting agenda is provided in Attachment B.

3. BACH version 1.1 was sent out to the field bureaus in May 1986. Two operational "bugs" have been identified: one causing an error in the appending of text to the message header; and the other in memory overlay due to the large size of the LSL data base. Both problems have been analyzed by CRW and program corrections have been made. As soon as the program modifications have been thoroughly tested and verified as correct, a new version of the BACH software will be sent to all field bureaus.

4. The Paraguay and Panama IBM PC/XT's were both damaged so extensively in shipment that they were returned to Headquarters for repair. The damaged parts have been fixed or replaced, and the units should be returned to the bureaus in the near future.

5. With regard to papertape equipment, there are two matters of concern.

    a) The Extel F/ROMs in the field differ from the one installed in the Headquarter's Extel that was used for BACH development testing, and thus the bureau systems are not operating as expected. New F/ROMs have been ordered and sent to the required bureaus and installed in the Headquarters system.

SUBJECT: Minutes of the BACH Status Review, 18 June 1986

b) The Far East bureaus are using the DSI 2400 as their papertape punch, but the Headquarters BACH developers do not have such a system for development and testing.

6. The message traffic from the field bureaus has raised several questions regarding how BACH handles message formatting (JANAP 128 and ACP 127) and how it addresses various FBIS editorial requirements. These questions have been reviewed, summarized and categorized according to the functional area of concern. A summary listing of these issues is included in Attachment C.

a) There is concern over the required sequence of characters following the Transmission Indicator (TI) and preceding Format Line 2. ACP 127 requires 5 spaces, 2 carriage returns, and 1 line feed. BACH currently prints 2 carriage returns and 1 line feed. JANAP 128 requires 6 blanks and 6 letters characters. However, there have been varying requests from the field for such capabilities as 12 letters and "6 inches" of blanks. It was noted that the number of blanks is not critical; its purpose is to provide a leader on the tape. Similarly, the number of letters characters is not important; its function is merely to clear the uppercase, and is not even required. _____ CRW, suggested that this capability   STAT might be implemented as a table driven option, thereby allowing each bureau to customize according to their own preference. Headquarters should also survey the bureaus to find out what their requirements are.

b) There has been a request for field bureaus to be able to send messages to themselves, without their PLA appearing in the message. This capability is currently supported by BACH. After thorough discussion on the requirements and propriety of this request, it was agreed to allow the bureaus the freedom to satisfy their message routing needs as they see proper, and to leave BACH as is.

c) The facility in BACH to allow operators to selectively exempt (XMT) Address Indicator Group (AIG) addressees is not easily accessible for operations, so BACH will be modified to include the AIG XMT function in the Generate Header menu.

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Page Three

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d) Bureaus have requested the capability to XMT and ZEN the same addressee. BACH will be modified to allow the operator freedom in accomplishing this. (BACH 2.0 - procedural solution Gv. TA)

e) It was incorrectly assumed in the original design of BACH that most addressees are action, not info, and the software was designed accordingly. However, it appears that the opposite is generally true. To change BACH now to facilitate info addressee handling would require a major software redesign effort. The attendees of the meeting agreed that very few addressees must be sent messages as info, in fact the only one brought to mind was Ankara. One suggestion made was that the bureaus reevaluate their procedures of automatically sending messages as info to all but Headquarters. However, it was noted that in the case of dual precedence messages, recipients must react according to the higher precedence if they are addressed as action, and that there are instances where addressees should definitely receive their messages at the lower precedence. Another suggestion proposed to have BACH automatically generate message headers specifying Headquarters as action and all other addressees as info.

f) The use of the terms "dual" and "split" with regard to precedence has caused considerable confusion between Headquarters and bureaus. Although the communications manuals explicitly refer to "dual" precedence, the field bureaus have apparently adopted the term "split" precedence to indicate messages sent at one precedence for action addressees and at a lower precedence for info addressees. [   ] offered to send a message to the bureaus indicating that the proper term to use is "dual". Semantics aside, the proper formatting for dual precedence is specified as follows: ACP 127, Format Line 2 requires the character of the higher precedence to be keyed twice, with no space between the two characters, and Format Line 5 requires the character of the higher precedence, followed by a space, followed by the character of the lower precedence. JANAP 128, Format Line 1, requires only one entry of the character of the higher precedence, and Format Line 5 requires the character of the higher precedence, followed by a space, followed by the character of the lower precedence.

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SUBJECT: Minutes of the BACH Status Review, 18 June 1986

g) There has been a complaint that the "ONLY" option could not be invoked in all modes of header generation. However, BACH was written in accordance with the FBIS Editorial Handbook, and therefore purposely restricts the use of "ONLY" where not appropriate, according to FBIS policy.

h) New paragraphs are started by three spaces, and paragraphs are divided by 2 carriage returns and 1 line feed. Tel Aviv has requested 2 line feeds between paragraphs. The Wire Service also uses 2 line feeds between paragraphs for ease of readability. _____ will further investigate the   STAT
requirements for paragraph spacing.

i) The use of the figures function between the Station   BACH puts
Serial Number and the Julian date in Format Line 3 has become a figure for ACP1
matter of debate. Tel Aviv has indicated that it is required for ACP 127 format, but that just a space is needed in JANAP 128 format. Following the meeting, _____ confirmed   STAT
the requirement, per ACP 127, section 4, paragraph 137G, is: Figures, Station Serial Number, Space, Julian Date, Letters, 2 Carriage Returns, 1 Line Feed.

j) In conjunction with discussion relative to ACP 127 header generation, _____ noted that corrections are   STAT
currently being made to the Vienna LAN version of BACH for ACP 127 header generation, and he would like a way of testing the changes. _____ offered to review printed copies of   STAT
the tape for accuracy. Additionally, it may be beneficial to send (i.e., mail) a copy of a punched tape to a bureau for transmission back to Headquarters.

7. Before closing the meeting, _____ addressed some of   STAT
the future plans for BACH.

a) After the "fixes" to the current version of BACH are released to the field bureaus, the next version will standardize and enhance the LSL capabilities. It will allow bureaus to establish their own names for consumer packages used in conjunction with the LSL packages. LSL package names will remain constant, thereby facilitating field update without impacting bureau defined packages.

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    b) Evaluation of BACH in Okinawa and locally has revealed that operators want to be able to edit entire messages before output. This capability is currently provided in the Vienna LAN software. The next major release of BACH will incorporate this capability.

    c) As indicated earlier, there is a need to establish a complete test bed for BACH, including all equipment located in the field, in order to perform thorough software testing before sending out new software releases.

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Attachments: As Stated

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Page Six

SUBJECT: Minutes of the BACH Status Review, 18 June 1986

DDS&T/FBIS/ESG/ADD/SES   (23JUN86)   STAT

Distribution:
Original - Addressee
       1 - DC/ADD
       1 - C/ESG
       1 - SA/ESG
       1 - C/OPS   STAT
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       1 - SES Chrono
       1 - Originator

Page Denied

ATTACHMENT B

BACH STATUS REVIEW
18 JUNE 1986

AGENDA

STATUS - BACH RELEASE 1.1
    SOFTWARE
    HARDWARE

ISSUES

    1. TI GENERATION
        ACP127 --- 5SP/2CR/1LF
        JANAP128 --- 6 BLANKS/6LTRS VS 12LTRS???

    2. SELF-ADDRESSED MESSAGES
        PROPOSE - OSRI ON FORMAT LINE 2, NO RI/PLA IN HEADER BODY

    3. AIGs
        XMT VS ZEW CONSUMERS
        PLACE XMT OPTION ON HEADER MENU
        LDOB6 GRAF2

    4. ACTION VS INFO ADDRESSEES

    5. DUAL VS SPLIT PRECEDENCE
        WHAT IS THE REQUIREMENT??

    6. ONLY FLAG (NOT ON RUTLAAA MESSAGES)

    7. SPACING BETWEEN GRAFS? SINGLE OR DOUBLE??
        SPACING FOR TABLES?

PLANS

    LSI - PACKAGE MAINTENANCE
    MESSAGE MANIPULATION
    TEST-BED

SOURCE	LOCATION		FUNCTION	PROBLEM	SUGGESTED SOLUTION	RESPONSE	ANSWER
	FORMAT	LINE					
TA061218	127	1	TI	PRINTS 2CR/1LF	NEEDS 5SP/2CR/1LF	HA452	BUREAUS HPE TO KEY IN, ALONG WITH CHANNEL NUMBER
BK629	127	1	TI	BETWEEN TI AND FORMAT LINE 2	NEEDS 5SP/2CR/1LF		
HK441	127	1	TI	BETWEEN TI AND FORMAT LINE 2	NEEDS 5SP/2CR/1LF		
NC439	127	1	TI	BEFORE FIRST FORMAT LINE	NEEDS 5SP/2CR/1LF	HA559	WILCO
TA806	127	5	HEAD	PRINTS SINGLE PRECEDENCE	NEED DOUBLED PRECEDENCE	HA558	WILL PROVIDE DUAL PRECEDENCE WITH INFO ADDRESSEES
TA061218	127	2	HEAD	RI'S INCL INFO ADDRESSEES PRINTED ALPHABETICALLY	NEED TO BE LAST	HA452	NOT NECESSARY TO BE LAST
TA806	127	2	XMT	DOES NOT XMT ADDRESSEES FROM AIG		HA558	WILCO
TA806	127	2	XMT	DOES NOT XMT ORIGINATOR FROM AIG		HA558	WILCO
TA806	127	2	ZEN	DOES NOT ZEN A ROUTER IN AN AIG		HA558	'JURY STILL OUT'
TA806	127	3	HEAD	NO FIGURE FUNCTION BEFORE JULIAN DATE	FGRS REQ BET ITEM # & JULIAN DATE	HA558	NOT NEEDED
BK629	127	3	HEAD	DELETE FGR BETWEEN SSN AND JULIAN DATE			
HK441	127	3	HEAD	NO FIGURE FUNCTION BEFORE JULIAN DATE			
NC439	127	3	HEAD	PRINTS 2SP VICE CORRECT 1SP AFTER OSRI		HA559	MODIFY BACH CONFIG.DAT FILE
TA061218	127	3	HEAD	NO FIGURES FUNCTION BEFORE JULIAN DATE	FGRS REQ BET ITEM # & JULIAN DATE	HA452	NO FGPS FUNCTION REQ IF FGR/SP IS FOLLOWED BY FGR
AU425	127	3	HEAD	WILL NOT GENERATE LINE 3 - AULAN VERSION ONLY			
TA806	127	5	HEAD	PRTS SNGL VS DBLE PRECEDENCE FOR DUAL PRECEDENCE ITEMS		HA558	WILL PROVIDE DUAL PRECEDENCE WITH INFO ADDRESSEES
TA061218	127	5	HEAD	PRINTS SINGLE LETTER FOR PRECEDENCE	NEEDS TWO LETTERS FOR PRECEDENCE	HA452	WILCO
TA061218	127	5	HEAD	PRINTS SINGLE PRECEDENCE	NEED DOUBLED PRECEDENCE	HA558	WILL PROVIDE DUAL PRECEDENCE WITH INFO ADDRESSEES
TA806	127	TEXT	PINKIE	DOES NOT PINKIE CODE		HA558	PROM PROBLEM

ATTACHMENT C

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SOURCE	LOCATION		FUNCTION	PROBLEM	SUGGESTED SOLUTION	RESPONSE		ANSWER
	FORMAT	LINE						
NC449	128	1	TI	PRINTS 12LTR/2CR/1LF, WHICH CAUSES AUTODIN DEFAULT	SHOULD BE 12LTR FOLLOWED BY PRECEDENCE			
AU425	128	1	TI	USING [ ] PROGRAM				
LD086	128	1	TI	2CR/1LF WOULD CAUSE AUTODIN REJECTION	NEED '6-INCHES' OF BLANKS/LTR/PRECEDENCE			
OM857	128	1	TI	ADDS 2CR/1LF/12LTRS; 2CR/1LF CAN CAUSE XMIT ERRORS	NEED 6 BLANKS/6 LTRS			
HK441	128	1	TI	NEED MIN 6BLK/6LTR AFTER TI; BACH FORMAT WILL REJECT				
NC439	128	1	TI	NEED 5SP/2CR/1LF BEFORE 1ST FORMAT LINE; CHANGED LATER		WA559	DESIGN WAS 12LTR 2CR/1LF	
NC452	128	2	HEAD	PRINTS SP BETWEEN OSRI AND SSN	DELETE SPACE			
NC452	128	2	HEAD	DOES NOT SPACE BETWEEN FIRST ROUTER AND SECOND	.			
NC439	128	2	HEAD	ADDS SPACE BETWEEN FINAL ROUTER AND CONCLUDING PERIOD	DELETE	WA559	USE WA515 PROCEDURES TO ELIMINATE	
NC439	128	)	ATAI	ADDS 2CR/1LF BEFORE PRECEDENCE	DELETE	WA559	BACH DESIGN BEGINS W. 12LTR/2CR/1LF BY REQUEST	
OM857	128	2	XMT	INCLUDE ORIGINATOR RI/PLA AS XMT OPTION				
OM857	128	2	XMT	DISPLAY ORIGINATOR RI/PLA IN MENU				
NC439	128	2	XMT	ADD XMT TO GENERATE HEADER MENU				
NC439	128	2	XMT	... 'THIS HEADER ONLY' OPTION		WA559	WILCO	
OM857	128	6-9	HEAD	LINES NOT MANIPULATED BY BACH		WA559	NEW AND INTERESTING PROPOSAL	
OM857	128	ALL	HEAD	MANIPULATE ENTIRE HEADER				
OM857	128	EOM	BT	ADDS 9 VICE CORRECT 8 LTR SHIFTS BEFORE BT				
NC439	128	EOM	EOM	ADDS 2CR/1LF AFTER 4N'S	DELETE	WA559	BACH PRODUCES 2CR/8LF, LD DOESN'T USE, MAY BE NC E	
NC439	128	EOM	EOM	ADDS 2CR/1LF AFTER FINAL SSN	NEED 2CR/8LF BEFORE 4N'S	WA559	BACH PRODUCES THIS	
OM857	128	EOM	EOM	ADDS EXTRA LF	DELETE EXTRA LF			
OM857	128	TEXT	PINKIE	DUES NOT PINKIE CODE				

SOURCE	LOCATION FORMAT	LINE	FUNCTION	PROBLEM	SUGGESTED SOLUTION	RESPONSE	ANSWER
TRB06	BACH	1	TI	PRINTS BLANKS, 2CR/1LF LETTERS	NEED BLANKS, LETTERS 5SP/2CR/1LF	WA452/WA558 PUNCH TYPES TI. SSP MUST COME FROM TAPE;WILCO	
AU425	BACH	--	FLAG	DO NOT USE 'CONTINUE HEADER' OPTION	INSTEAD USE SIDEKICK		
AU425	BACH	--	FLAG	CANNOT RETURN TO PREVIOUSLY ENTERED FLAG			
AU425	BACH	--	FLAG	NO AUTO WORDWRAP FOR PROSLUGS BEYOND 69 CHARACTERS			
NC452	BACH	--	FLAG	'STRONGLY ENDORSE' ABILITY TO EDIT FLAGS			
NC439	BACH	--	FLAG	ADDS 2CR/1LF AFTER EACH LINE	NEED 2CR/2LF AFTER EACH LINE	WA559 LO'S EPROM ADDS EXTRA LF. SUGGEST NC GET SAME EPROM	
NC439	BACH	ALL	HEAD	ADD 'DELETE FOR THIS HEADER ONLY' OPTION		WA559 (NO COMMENT)	
AU425	BACH	--	HEAD	NEED 'DELETE PUTLARA' AS OPTION			
AU425	BACH	--	HEAD	DO NOT USE OPTION 5	USE 1-4, MODIFY LINES 7-8 USING SIDEKICK		
HK441	BACH	--	INFO	PREFER IDENTIFY ACTION RATHER THAN INFO			
AU425	BACH	--	INFO	TEDIOUS IDENTITY OF INFO ADDRESSEES	OPTION 4 ID ACTION VS INFO CONSUMERS		
AU425	BACH	--	ONLY	NEEDS 'ONLY' FLAG IN CONTINUE HEADER OPTION			
OW857	BACH	--	ONLY	NEED 'ONLY' AS OPTION FOR REAL-TIME HEADER			
TR061218	BACH	--	PINKIE	DOES NOT PINKIE CODE		WA 452 CODING PRESENT AT HQ	
NC439	BACH	--	PINKIE	'NO EVIDENCE' OF CODING		WA559 (NO COMMENT)	
TRB06	BACH	--	TEXT	ADDS 2CR/1LF AFTER 3SP, DOUBLE-SPACED BET GRAFS		WA558 CODING BELIEVED CORRECT	
NC452	BACH	--	TEXT	--	2CR/1LF PREFERRED OVER 2CR/2LF	--	
TRB06	BACH	--	TEXT	ADDS 2CR/1LF AFTER 2CR/1LF AT END OF LINE		WA558 MAY BE DUE BLANK LINE BETWEEN GRAPHS IN NOTEPAD FI	
TR061218	BACH	--	XMT	DOES NOT XMT FROM AIG		WA452 XMT ON AIG MENU, BUT CAN BE PUT ON GENERATE HEADER	
BK629	BACH	--	XMT	WORKAROUND IS OKAY			
JN145	BACH	--	XMT	WORKAROUND IS OKAY			
JN145	BACH	--	XMT	PUT AIG CONSUMER XMT/ADD OPTION IN 'GENERATE HEADER' MENU			
BK629	BACH	--	XMT	XMT CONSUMER FROM AIG AND ZEN SAME CONSUMER			
LD086	BACH	--	XMT	WORKAROUND PER ACP100	DON'T USE OSRI IN FORMAT LINE 2		
OW857	BACH	--	XMT	INCLUDE IN HEADER MENU			
HK441	BACH	--	XMT	NO NEED TO XMT/ZEN SAME CONSUMER			
TR061218	BACH	--	XMT	DOES NOT XMT ORIGINATOR		WA452 BACH INCL OSRI IN FORMAT LINE 2, NOT LIST RI IN BO	

TECHNICAL MEMORANDUM

TO:		**NO.**	86-0128
FROM:	CRW	**DATE:**	7/14/86

STAT

ATTACH

STAT

Form 163a

SUBJECT: Changes Made to BACH Version 1.1 to Create Version 1.2

This is a list of those modifications which were made to BACH 1.1 in order to expedite an operational release of the software prior to release 2.0. These changes were tested by CRW and will be delivered to the Configuration Management Board for final testing.

The CRW tests included message transmission over the wire and into Midas at the Headquarters Communication Center. This test verified that the JANAP 128 format is correct. The pinkie-coding was verified visually by Headquarters Communications Personnel. These tests were conducted with the Extel B-315 Paper Tape Punch. The DSI 2400 and the Extel TelexCutter were not available for verification.

Further testing should involve the introduction of a BACH tape into ACP 127 and JANAP 128 communication systems from a bureau. This may be accomplished by sending a tape to two bureaus and asking them to introduce it into the system. Alternatively, BACH could be released to a limited number of bureaus on a test basis. These bureaus would then transmit a BACH generated message for format verification in Midas.

The changes made for release 1.2 are as follows:

1. The changes made for release 1.1 introduced a bug which could not be detected without an Extel B-315. This bug caused the program to abort after the "Tape" option was selected to output a message with appended text to the paper tape punch. The source of the error was located and corrected. The Headquarter's B-315 was then made available and BACH was tested for correctness. (ref: TA806)

2. BACH was generating random characters where spaces should occur and pinkie-coding was not evident in the tapes generated in the field. The PROM and the B-315 at Headquarters was not the same as the PROMs in the field, therefore, Headquarters obtained an identical PROM in order to have an accurate test bed for BACH. This new PROM showed that there were in fact discrepancies between the PROM on which BACH was developed and the field's PROMs. In order to drive the device with the new PROM the Asynchronous Serial Port was initialized at one and one half stop bits rather than one.

CRW

As a result of this problem, a serious discrepancy in the Turbo Pascal software was noted and worked around. This discrepancy was verified by Borland's technical staff. The result of this discrepancy was that the first 32 characters in the BACH ASCII to Baudot conversion array were replaced with random characters in memory. Both the space and the blank (used in pinkie-coding) are within these first 32 characters. After consulting Borland, it was determined that the Turbo Pascal memory allocation routine was at fault and that BACH would have to control memory independently. This has slowed the program noticably (e.g. from 45 to 50 seconds to load the entire LRB database), but BACH is still relatively fast. The Turbo memory management bug became evident with the large LRB database, it would not occur with small databases. (ref: TA806, NC439)

In the effort to locate and correct the above discrepancies and with the hope that a better BACH be released to the field, several other key discrepancies were corrected. These modifications should increase the utility of BACH in the field pending release 2.0. The following additional modifications were made to the BACH program:

1. In ACP 127 protocol with INFO consumers, the dual precedence is given as the default, rather than the split precedence. (ref: TA061218, DR: TA003)

2. Bureaus are allowed to exempt themselves from an AIG. (ref: TA061218, DR: TA005)

3. The REF Line in the header repeats the word REF at the beginning of each new reference line and allows for more than one REF flag in a header. (ref: AU425, DR: AU004)

4. Additional header lines are offered by BACH for every Midas format element that is permitted to continue for more than one line. BACH continues to prompt for additional lines by writing a dashed line on-screen. The user must strike the return key on the blank line in order to end the prompting process. If the Midas element is allowed to appear more than once in a header, completing the first element will cause BACH to prompt for additional elements until the user has moved on to the succeeding Midas element. (ref: AU425, DR: AU004)

5. The character sequence (5 spaces 2 CR 1LF) which follows the TI and precedes Format Line Two in ACP 127 was added to the beginning of every header in this protocol. (ref: NC452, TA061218, BK629, DR: AU007, TA001)

6. The character sequence (6 blanks 6 LTRs) which follows the TI and precedes Format Line Two in JANAP 128 was added to the beginning of every header in this protocol. (ref: OW857, LD086)

7. The end-of-line sequence between paragraphs was changed from 2 CR 2 LF to 2 CR 1 LF. Although the original sequence reflects the official DCA protocol, as was verified by HQ Communications Personnel, the bureaus were not accustomed to using this format. In addition, the elimination of this requirement will facilitate the transmission of tables through BACH. (ref: TA806, DR: TA008)

2

8. The installation routine still displayed eight dashes on-screen for the bureau RI. Although it did not allow an illegal number of characters in the RI, the eighth dash was eliminated to avoid confusion.

9. BACH was modified to display an initial screen upon entry into the program. This screen lists the program name and version number. The screen is cleared after three seconds.

10. The new PROM allows the null character to print on the Extel. This means that pinkie-coding characters must be included in the 69 characters per line limit. If this limit is exceeded, the B-315 inserts 2CR 1LF after the 69th character. Due to the obvious undesirability of this feature, BACH was modified to count the number of pinkie-codes required by the Headline, Sourceline and Proslug, and to reduce the allowable line length accordingly. For the Sourceline and Proslug, any additional characters will be word-wrapped to the next line. The Headline, however, may not exceed one line. Therefore BACH counts the number of required pinkie-code characters in the Headline and if the 69 character maximum is exceeded, the user is asked to reduce the line by the excess number of characters. The Editorial Handbook's restriction on Headline length should prevent this from being a frequent occurrence.

11. The new PROM for the Extel B-315 Paper Tape Punch disables the feed button. This makes it impossible to generate a leader and trailer for the tape. Headquarter Communications personnel suggested that BACH be modified to punch a string of nulls at the beginning and end of every tape. But the leader nulls, and the 6 nulls preceding Line Two in JANAP 128, offset the beginning of Format Line Two and cause the Extel to insert 2CR 1LF before the end of that line. The leader and trailer were changed to LTRs since these characters do not displace the Extel print head. Accordingly, the leader contains 2CR 1LF, to bring the print head to the proper position, and 70 LTRs characters. The trailer contains 50 LTRs.

CRW

TECHNICAL MEMORANDUM

TO:		NO.	86-0137

STAT

FROM:	CRW	DATE:	7/14/86

STAT

SUBJECT: List Of Desired BACH Changes For Release 2.0

ATT/

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This is a list of the known BACH change requests made by ADD and bureau personnel.

1. In order to avoid a serious configuration management problem, BACH and Vienna-On-Network BACH (VON BACH) will be merged into one program. This merger will be transparent to the user. A CONFIG.DAT field which can be set at Headquarters will control whether the user views LAN or stand-alone BACH options.

2. The Package Description field will be lengthened to three lines to approach the length of the longest LSL description. This field will be stored in a new database called PKGTEXT.DAT which will be indexed on the Package Name.

3. Another field in the PKGTEXT.DAT database will be used to store the flag instructions which accompany certain packages in the LSL. This field will allow three lines of flag/comment text.

4. The length of the Plain Language Address will be changed from 70 to 60 characters.

5. Packages will be modified so that they may contain other packages. This will allow the bureaus to build personal packages from a combination of LSL packages. If personal packages are created in this fashion, which we believe is similar to the bureau's current practices, then the data conversion process will keep the bureau's personal packages up-to-date by virtue of their up-to-date constituent packages.

6. When the user asks to delete a consumer from a package and that consumer belongs to a package within that package, BACH will give an error message informing the user of the consumer's status and will not allow the delete operation.

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7. The modifications listed in 8 through 11 will change the nature of the BACH databases. This will require us to write a transfer routine so that LRB will not be required to re-enter the entire LSL.

8. BACH should allow the creation of messages which exclude the Headquarters Washington consumers. Accordingly, a "Bypass Washington" option will be added to the Message Type Menu off of the Header Generation Menu.

9. The Header Generation Menu will include an "XMT" option which will allow the user to impart XMT status to a consumer in the current header. This operation will require the consumer to already be in the header as a member of an AIG. The XMT status is not permanently attached to that consumer in that AIG.

10. FBIS personnel indicated that the distinctive treatment of bureau packages throughout BACH would facilitate its use and encourage the bureaus to maintain the entire LSL database through BACH. Examples of this separate treatment are a List Bureau Packages option, a Print Contents of Bureau Packages option, and a separate column for bureau packages in the List Packages/AIGs Containing a Consumer option on the Master List Menu.

11. A new Header Generation Menu option will be created to list those packages, AIGs and consumers which the user has already specified as a part of the header currently being built. Thus the user could enter this option any time he needed to confirm the status of the current header.

12. The list options for packages and AIGs will sort the constituent consumers by RI and PLA before printing.

13. The Data Conversion utility will update local BACH data files with the newest LRB data files. This option will assure that the BACH data files concur with the Lateral Service List of consumers produced by headquarters, but will leave the bureaus personal packages intact.

14. Two fields which could potentially assist the bureau in the maintenance of an up-to-date Lateral Services List are the Date and BFN of the Headquarters Message which authorized a particular database change. These fields are currently kept by BACH as optional entries in those operations which alter the nature of a consumer, package or AIG. The bureau should be able to query based on the authorizing message date in order to ascertain the status of changes to the database.

15. An option to list all consumers with a particular Routing Indicator will be added to the Query Menu.

16. BACH will force the Modification Date to conform to the DD/MM/YY format when entered and give the format mask on the line beneath the input line. The user must enter all 8 characters.

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17. Print-outs of the contents of Packages and AIGs currently list today's date at the beginning of every package/AIG. This should be changed to list the Date of Last Modification. In the event that no such date has been entered by the user, BACH would return to today's date as the relevant date. In addition, the first page of the print-out would contain a one line heading which gives today's date.

18. The date on print-outs will be changed to read 11 JAN 86 instead of 11/01/86 to avoid confusion due to the difference between American and European formats.

19. When Package Names and RIs are entered in the create and modify options, BACH will remove any trailing spaces that the user may accidentally enter.

20. An option must be created which allows the user to view the contents of a package in terms of its constituent packages, rather than a list of consumers.

21. A Query option will be created to list all consumers which are currently on Minimize.

22. The Minimize option will be modified to eliminate the 15 packages and AIGs maximum which is inherent in the current design.

23. When a header with appended text is successfully output through the "Real-Time" header option on the Header Generation Menu, BACH will create an ASCII File which contains an exact replica of that message. This file can be edited through any ASCII text editor and retransmitted through a separate BACH output program.

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Possible Future Modifications After Release 2.0:

1. A routine will be added to BACH which will enable the program to read a punched paper tape and to store the text in a disk file.

2. A consumer's Routing Indicator (RI) is not necessarily unique. In fact, often there exist small groups of related consumers which share the same RI. Since the interests of this group are often similar, it would be convenient if BACH could provide a means to act upon the entire group at once. Currently, when the user specifies a RI which belongs to more than one consumer, BACH lists all such consumers and asks the user to select the consumer of interest. This modification would allow the user to enter a special character (e.g. an asterisk) which will cause BACH to perform the requested operation on every consumer with that RI.

3. Since the bureaus will use BACH in conjunction with text editors (namely NotePad), we may want to begin thinking about the need for BACH to partition long message text files into separate takes and to disseminate those takes automatically.

4. The Header Generation Menu could be expanded to include options to designate entire packages and AIGs as INFO consumers. These options will eliminate the notion of a message having split or non-split precedence by default since a split precedence message will no longer require additional steps.

5. The Message Log File employed by VON BACH could be adapted for non-LAN use. This addition would include those Log Menu and Query options which could be useful for all bureaus.

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